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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/083,896	02/27/2002	Paul J. Cecil	7784-000407	7498

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EXAMINER

MCHENRY, KEVIN L

ART UNIT	PAPER NUMBER
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1725

DATE MAILED: 09/03/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/083,896

Applicant(s)

CECIL ET AL.

Examiner

Kevin L McHenry

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17-20 is/are allowed.
- 6) ☒ Claim(s) 1-4,6,8-11,13,16 and 21 is/are rejected.
- 7) ☒ Claim(s) 5,7,12,14,15 and 22 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2 and 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 24, 200, and 130. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: 118. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

3. The disclosure is objected to because of the following informalities:

On page 7, line 3, clamping block 34 should instead be clamping block 16

On page 8, line 7, cradles 52 should instead be saddles 52

On page 8, line 10, there is an extra "and" at the end of the line

On page 11, line 19, tubing 24 should instead be tubing 34

On page 12, line 12, a period is needed at the end of the line.

Appropriate correction is required.

Claim Objections

4. Claim 5 is objected to because of the following informalities:

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In claim 5, line 1, "of" should be inserted before "each said".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claim 10 is rejected under 35 U.S.C. 102(b) as being anticipated by Flowers et al. (U.S.P. 4,190,186).

Flowers et al. teach a process for cutting and welding tubing that uses a tooling plate and a plurality of clamping blocks in which the tubing is clamped in clamping blocks. Then the tubing is cut to a desired length while it is clamped, such as by a right weld clamp 20, and mating pieces of tubing are orbitally TIG welded while the tubing remains clamped, such as by right weld clamp 20. The clamps are attached to the tooling plate by channels that guide the clamping blocks. The clamping blocks also have top and bottom halves, or claws, for clamping the tubing. Flowers et al. also teach that the tubing is cut while it is clamped and that deburring is performed only if necessary. (see U.S.P. 4,190,186; particularly Figure 1; column 1, lines 5-10; column 2, lines 20-22; column 3, lines 50-54, 60-67; column 4, lines 24-34; column 6, lines 8-44, 59-68; column 7, lines 1-19).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Flowers et al. (U.S.P. 4,190,186) as applied to claim 10 above, and further in view of Burns (U.S.P. 4,290,291).

The former reference teaches the process described above in section 6. However, this reference does not teach that the clamping blocks are fixed to the tooling plate by bullet nose pins.

Burns teaches a process in which bullet nose pins are used to position and fix parts to a tooling plate (see U.S.P. 4,290,291; particularly Figures 1 and 2; column 3, lines 20-32).

It would have been obvious to one of ordinary skill in the art at the time that the applicant's invention was made to have modified the process of Flowers et al. by the teachings of Burns. One would have been motivated to do so in order to a fixing and position means on the tooling plate of Flowers et al. that would provide accurate and efficient positioning of clamping blocks. One of ordinary skill in the art would recognize this advantage since the shape of the bullet tip would provide accurate positioning of a part or block with a hole since the bullet tip would slide through the hole until the side

of the pin engages the interior of the hole, providing accurate positioning of parts on the pin even when the pin is misaligned with the hole.

9. Claims 1, 8, 9, 6, 13, 16, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flowers et al. (U.S.P. 4,190,186) as applied to claim 10 above, and further in view of Benway et al. (U.S.P. 4,868,367).

The former reference teaches the process described above in section 6. However, this reference does not teach specific structures for the welding device.

Benway et al. teaches a welding cassette that includes a first half and a second half hingedly connected to the first half so that the second half would have to be opened to place tubing inside to be clamped for welding. The cassette is designed with two clamps to form a U-shaped structure that accepts an orbital welder between the clamps. Benway et al. teach that this cassette allows compensation for tubing tolerance variations and eliminates tubing misalignment. The cassette is designed so that the hinged cassette halves accepted clamping blocks, or collet elements 48 and 50, that engage and clamp the tubing (see U.S.P. 4,868,367; particularly Figure 1; column 1, lines 9-15, 51-58; column 3, lines 8-36; column 4, lines 1-19). This cassette clamp would retain the circumferential shape of the tubing during operation.

It would have been obvious to one of ordinary skill in the art at the time that the applicant's invention was made to have modified the process of Flowers et al. by the teachings of Benway et al. One would have been motivated to do so in order to provide a welding cassette that allows compensation for tubing tolerance variations and eliminates tubing misalignment, as taught by Benway et al.

10. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Flowers et al. (U.S.P. 4,190,186) in view of Benway et al. (U.S.P. 4,868,367) as applied to claims 1, 8, 9, 6, 10, 13, 16, and 21 above, and further in view of Johnson (U.S.P. 5,383,503).

The former references teach the process as described above in section 9. However, these references do not teach that the tooling plate has an identification number for a tubing part and an outline for a tubing part.

Johnson teaches a manufacturing guide assembly in which an outline of the part to be made is used on a tooling plate (see U.S.P. 5,383,503; particularly Figure 1; column 4, lines 40-47).

It would have been obvious to one of ordinary skill in the art at the time that the applicant's invention was made to have modified the process taught above by the teachings of Johnson. One of ordinary skill in the art would have recognized that having an identification and outline of proper parts on the tooling plate would aid in preventing the use of the wrong parts during operation since operators would have to match parts by identification and/or shape. This system in turn aids in the prevention of waste during processing. Such a system is akin to the system of using outlines and/or identification of tools on a workbench so that tools are placed in their proper spot and can be easily found again.

11. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flowers et al. (U.S.P. 4,190,186) in view of Benway et al. (U.S.P. 4,868,367) as applied to

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claims 1, 8, 9, 6, 10, 13, 16, and 21 above, and further in view of Burns (U.S.P. 4,290,291).

The former reference teaches the process described above in section 9. However, this reference does not teach that the clamping blocks are fixed to the tooling plate by bullet nose pins.

Burns teaches a process in which bullet nose pins are used to position and fix parts to a tooling plate (see U.S.P. 4,290,291; particularly Figures 1 and 2; column 3, lines 20-32).

It would have been obvious to one of ordinary skill in the art at the time that the applicant's invention was made to have modified the process of Flowers et al. by the teachings of Burns. One would have been motivated to do so in order to a fixing and position means on the tooling plate of Flowers et al. that would provide accurate and efficient positioning of clamping blocks. One of ordinary skill in the art would recognize this advantage since the shape of the bullet tip would provide accurate positioning of a part or block with a hole since the bullet tip would slide through the hole until the side of the pin engages the interior of the hole, providing accurate positioning of parts on the pin even when the pin is misaligned with the hole.

Allowable Subject Matter

12. Claims 17-20 are allowed.
13. Claims 5, 7, 12, 14, 15, and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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14. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record does not teach or suggest a system for welding thin-walled tubing that uses clamping blocks mounted to a tooling plate in which the clamping blocks have top and bottom halves with the top half having a clocking slot for rotationally orienting tubing. Prior art clamping blocks, such as those taught by Benway et al. (U.S.P. 4,868,367) do not have these clocking slots. Nor does the prior art teach the mating of the clocking slot with a clocking pin.

Nor does the prior art of record teach a method of welding tubing in which clamping blocks are removed from the tooling plate while the tooling remains clamped in the clamping blocks, the blocks are mounted in a cutting machine, and the tubing is cut. Prior art methods, such as that taught by Flowers et al. (U.S.P. 4,190,186) keep the blocks mounted on the tooling plate and perform welding and cutting on one machine.

Conclusion

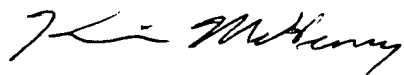
15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Martin (U.S.P. 3,933,292), Kagimoto (U.S.P. 4,750,662), Robinson (U.S.P. 2,108,077), JP 59-232698, Jusionis (U.S.P. 5,288,963), and Diede (U.S.P. 5,732,455) are cited of interest for illustrating the state of the art in tubing clamp systems.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin L McHenry whose telephone number is (703) 305-9626. The examiner can normally be reached on M-F.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas G Dunn can be reached on (703) 308-3318. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



August 22, 2003



M. ALEXANDRA ELVE
PRIMARY EXAMINER